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ABSTRACT

A study examined coaches' behavior and classified the types and rates of coaches' behavior by time of athletic season (early or late), win/loss record, and throughout the time frame within a single contest. Subjects included all the volunteer coaches in a 13 team, softball program for 10-12 year old girls. The season consisted of a double round-robin schedule, with no post-season tournaments or all-star games as part of the program. A modified version of an event-recording instrument was used to collect coaching behavior data. The instrument included a total of 10 different behavior categories; among these were 4 categories that dealt with responses directed at opponents or officials, and 2 categories reserved for miscellaneous behaviors. The instrument was comprised of four "positive" and four "negative" behavior categories. An analysis of data revealed that: (1) 99 percent of all feedback was related to performance; (2) only 3 percent of the coaches' behaviors was categorized as negative; and (3) response rate nearly doubled from early season to late season. Subsequent analysis of winning and losing coaches' behavior indicated that statistically significant different profiles could not be established for winning and losing coaches based on type and rate of feedback and that no differences could be established between whether the team was ahead or behind and the rate of feedback behavior. (Author/JMK)

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# Coaching Behavior of Girls Youth Softball Coaches

Controversy and unresolved issues continue to be a part of the youth sport scene. A recurrent subject that is seldom neglected and receives an enormous amount of discussion, is the role of the coach. The relationship between coach and player is certainly a vital aspect of the youth sports environment, and it has been suggested that this relationship is a primary determinant of the ways in which children are ultimately affected by their participation. Because the coach has been ascribed such a crucial role in the athletic arena, it is extremely important to develop as complete an understanding of the coach's behavior as is possible. The purpose of this study was to examine the behavior of coaches and classify the types and rates of behavior by time of season (early or late), win/loss record, and throughout the time frame within a single contest.

Subjects selected for this study included all the volunteer coaches in a thirteen team, 10-12 year old girls age group softball program. The season consisted of a double round robin schedule, with no post season tournaments or all-star type games as a part of the program.

A modified version of an event recording instrument (Dubois, 1981) was used to collect coaching behavior data. The instrument included a total of ten different behavior categories. Among these were four categories that dealt with responses directed at opponents or officials, and two categories reserved for miscellaneous behaviors. The instrument was comprised of four "positive" and four "negative" behavior categories and had previously been subjected to and met reliability requirements. An analysis of data revealed that 1) 99% of all feedback was related to performance, 2) only 3% of the coaches' behaviors was categorized as negative, 3) the rate of response nearly doubled from early season to late season. Additionally, "t" tests were used to determine significant differences between winning and losing coaches and the rate of feedback based on ahead/behind during the contest. The data indicated that statistically significant different profiles could not be established for winning and losing coaches based on type and rate of feedback and that no differences could be established between ahead/behind and the rate of feedback behavior. The importance of the findings of this research is that it has demonstrated that coaching behaviors can be systematically collected and analyzed and used to interpret the relationships in a youth sport setting.

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Il y a quelque perspicacité en le rôle central des entraineurs des sports des jeunes par la recherche enquête systématique. L' objet de cette enquête était pour examiner la conduite des entraîneurs et pour grouper cette conduite en fonction du type et la vitesse de la réponse et l'effet d' interaction de dettes résponses avec le temps de la saison, gagner, perdre, et la duree du temps en une sevl lutte.

Un instrument était employé pour coder et pour enregistrer les conduites des treize entraîneurs du softbail des jeunes filles. Les conduites étaient classifiés largement comme positif et negatif et les plus amples classifications étaient encouragement, commentaires, correctif, ou general. Les conclusions principals étaient:

1.) 99% des toutes les conduites de la rétro-action étaient se rapportés a la performance des jeunes filles.

2.) Seulment 3% de la conduite était catégorisé comme neagtif.

3.) La vitesse des réponses presque était doublé par les entraîneurs du commencement de la saison à fin de la saison.

4.) Un profil des entraîneurs qui gagnent souvent et des entraîneurs qui perdent souvent n'était pas établi.

5.) Il n'y a pas un rapport entre en avant/en retard et la vitesse des conduites de la rétro-action.

Introduction

Controversy and unresolved issues continue to be a part of the youth sport scene. A recent publication, Youth Sports: A Search for Direction (Appenzellar et al., 1981), offers prime examples of how a group of youth sport promoters, managers, coaches and interested parties agree and disagree on topics such as league control, playing regulations, coaching certification, safety, liability, and others. However, a recurrent subject in youth sport that is seldom neglected and receiving an enormous amount of discussion, is the role of the coach.

The relationship between coach and player is certainly a vital aspect of the youth sports environment, and it has been suggested that this relationship is a primary determinant of the ways in which children are ultimately affected by their participation (Singer 1972; Smith, Smoll, Hunt, Curtis and Coppel, 1979). Because the coach has been ascribed such a crucial role in the athletic arena, it is extremely important to develop as complete an understanding of the coach's behavior as is possible.

Data gathering efforts, as they involved youth sport coaches, have employed various strategies. Research studies concerning coaches have varied, ranging in methodology from single case studies (Burchard, 1979) to self-report studies, checklists, questionnaires, and self-monitoring forms (Smoll and Smith, 1980). A more recent development for gaining a more complete accounting of a coach's behavior involved a variety of systematic observation techniques developed by Siedentop (1976). The technique and accompanying instruments initially developed to evaluate teacher-student behavior in the classroom/gymnasium, have been adapted to meet the needs of researchers interested in recording information concerning coaches behavior in the athletic arena (Dubois 1981).

Smith, Smoll, and Curtiss (1978),using Little League Baseball coaches as subjects,successfully generated data using observational techniques. Through similar observational strategies and instrumentation other sports scientists have examined and attempted to describe the nature of coaches' behaviors. Dubois (1981, 1982) recorded the responses of coaches in two competitively different football and soccer leagues. One of the soccer leagues was designated for females only. Although competitive opportunities for girls have increased considerably, research examining the coaching behavior of girls youth sport coaches is virtually non-existent.

To date, the behaviors of girls youth softball coaches have not been investigated via a qualitative/quantitative systematic recording method. It was the purpose of this study to examine youth softball coaches' behaviors via this systematic recording method. Specifically, behavior frequency rate and type, and their association wtih time in contest, winning, and time of season, were examined.

Method

Subjects selected for this study included all the volunteer coaches in a thirteen team, 10-12 year old girls age group softball program. The teams were supposedly equal in talent and age (a specified number of 10, 11, and 12 year olds existed on each team). The youth softball program was located in a medium-small (25,000) size city in central Iowa. The season consisted of a double round robin schedule, with no post season tournaments or all-star type games as a part of the program.

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A modified version of an event recording instrument (Dubois 1981) was used to collect coaching behavior data. The instrument included a total of eight different behavior categories. Among these were four categories that dealt with responses directed at a coach's team, with two categories for responses directed at opponents or officials, and two categories reserved

for miscellaneous behaviors. The instrument was comprised of four "positive" and four "negative" behavioral categories. The instrument was a replica of the Dubois (1981, 1982) instrument, which had been subjected to and met reliability requirements.

A team of four trained observers including the two investigators, collected all the data. Prior to the softball season the observers practiced recording coaches' behaviors and recorded a .90 interobserver reliability coefficient. Each coach was observed four times; two times in close succession in the early part of the season and two times in close succession in the late part of the season. Observers arrived in sufficient time, prior to their assigned game, to blend into the spectator setting within good auditory and visual distance of the coach.

Games were six innings in length with the observer commencing recording the instant the umpire cried, "Play ball!" The normal course of action in previous studies (Dubois 1980, 1982) had been to find a suitable time for an observer break to manage recorder fatigue. Consequently, immediately following the third out of the bottom half of the third inning, the observer took a break and did not resume recording responses until the first pitch of the top half of the fourth inning. The recorder also noted whether the observed coach's team was tied, ahead, or behind after three innings of play.

## Results

One method of examining and highlighting data from this study was prepared via descriptive statistical techniques compiled as a frequency table. Table 1 presents the coaches' behavior as recorded by season (early and late) and by verbal categories (1-4) that dealt with responses directed at players as which

concerned their performance. Categories 5 and 6 which were designated for recording the information given to opponents and officials, and categories 7 and 8 which were designated miscellaneous, received less that 2% of the total, and therefore are not shown on Table 1. Also, the categories which were set aside for positive and negative nonverbal behaviors were not included in the table since some of the behaviors were not visible to the players and others were not directed specifically to players, while still others served, perhaps, only the role of a nervous reaction or habit of a coach. Consequently, it would have been misleading to include those responses under the umbrella of feedback that related to players' performance.

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Insert Table 1 About Here

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Category 1 which included a vast array of encouraging statements, received 44% of the total number of coaches' responses. To obtain a feeling for this category, the following is intended as a representative sampling: "that a girl; way to go; good job; way to throw; way to swing; great catch; good pitch; right on; keep cranking that arm; good eye; nice play; let's have another one; you can do it; excellent; go go go." The number of responses in this category nearly doubled from early to late season and were second in number only to category 2.

Included in category 2 were all types of positive instructional information. The following is a representative sampling: stay there; move in; back up; take your time; watch the ball; play's at second; break with the swing; relax your arms; swing through the ball; step on any bag; use smaller bat; closest base now; don't dance in the batter's box", received the greatest number of responses (4811). This figure represented 45.5% of the total. Similar to

category 1, the number of responses from early to late season nearly doubled. When the two positive categories are combined and totals are viewed, the categories comprise just over 89% of all recorded information as it concerned a player's performance.

It should also be noted that when categories 1 and 2 are combined for each coach, late season totals greatly increased for almost every coach, approximately doubling in frequencies. This was the case for both winning and losing coaches (to be classified a winning coach, the end of the year record had to surpass the .500 mark). Coach 10 was the only exception to this noted increase in corrective feedback responses from early to late season.

Negative feedback occasionally comprised the same statements as were noted previously in the positive categories, but were given in a sarcastic manner, were voiced in anger, or were communicated in a particular tone that was quite discernible as negative. The frequency of responses in these categories was quite insignificant, at least in number. Only one coach (coach 3) had a disproportionately large number of responses (when compared to the other 12 coaches). This particular coach was classified as a losing coach. When categories 3 and 4 are combined, these negative feedback and negative corrective feedback categories assume less than 3% of the total number of responses that dealt with performance related feedback. It was also found that total negative responses (all coaches combined) actually decreased in the late season.

In addition to descriptive statistics where frequencies and percentages were utilized to describe the coaches observed behavior, inferential statistics were used to examine the interactions of several variables in this sample.

An Analysis of Variance (ANOVA) was completed to determine if a significant difference existed between each of the coaches based upon the eight

verbal and two nonverbal categories. The results of this ANOVE indicated that in all of the verbal categories with the exception of category 8, a significant difference was noted at the .05 level. Similarly, in the two nonverbal categories, a significant difference (.05) was shown to exist between coaches.

Having established that significant differences did exist between coaches, "t" tests were used to compare the data between coaches designated as "winning coaches" and "losing coaches" based upon season record. The results of these "t" tests are presented in Table 2.

Insert Table 2 About Here

An examination of Table 2 reveals that those coaches designated as "losing coaches" emitted a significantly greater number of positive feedback responses and also a larger number of negative corrective responses. "Winning coaches" were found to have a higher number of responses in the positive non-verbal category, but should be viewed in light of previously mentioned limitations. The ANOVA completed on the interaction of coach vs. season indicated that a significant increase for late season vs. early season occurred for all coaches (.05 level). However, there was no difference between winning and losing coaches when examined by time of season.

Additional ANOVAs were completed to examine the differences between coaches on the factors of innings, 1-3 vs. 4-6, and ahead vs. behind. The results of these measures yielded no significant differences at the .05 level.

## Discussion

Several conclusions can be drawn from the results of this study. It

can be stipulated that a complete accounting of a coach's behavior can be observed and recorded as evidenced by the success of this study and prior research efforts (Dubois, 1981, 1982; Smoll and Smith, 1978). Therefore the consistency of the coaches behavior can be discussed in terms of their occurrence and nature.

An examination of the data from this study indicated that 99% of all feedback was related to the girls' skill performance. This includes a 7% figure that had been classified as nonverbal behavior, and nearly all were of a positive nature. When the results of this study supported the results of findings by Dubois (1981, 1982) and Rupnow and Stotlar (1982), where team-directed responses by coaches were 90%, 95%, and 96% respectively; it can be seen with [redacted] coaches [redacted] as mentors.

In terms of type of feedback, softball coaches were very positive and had less than 3% of their verbal feedback classified as negative. When observing little league baseball players of the same age group, in the same community, Rupnow and Stotlar (1982) found that although coaches were highly positive in their feedback to boys, they also emitted a higher percentage (8-10%) of negative response than did the girls' youth softball coaches. Dubois (1982) found that football coaches had a negative frequency rate of 30%; while coaches of a girls' soccer league and similar boys' soccer league emitted negative feedback in the 20% range (Dubois 1981). Therefore, the tendency should be eliminated to explain the differences between the 3% negative response frequency for girls softball coaches and the 20-30% frequency for boys' soccer and football coaches as a function of sex of participant.

Dubois (1982) offered some conjectures as to why the frequency rates of coaches he observed may have compared unfavorably to coaches observed in

Smoll's and Smith's (1980) study. He suggested geographic location differences, league goals, and samples which could have been skewed based upon sample size (80% of the population of potential coaches chose not to participate in their study). However, in examining Dubois' (1981) study, of the five soccer coaches observed, four were female which may have presented a skewed sample in that study involving the female players. If, for example, the soccer league had consisted of 12 teams but only 5 coaches had participated as in Dubois' (1981) study, a skew toward either positive or negative reinforcement could have occurred due to the sample being unrepresentative of the total population. In the girls' softball study, all 13 coaches in the league were participants.

When viewed in light of the significant increases in frequency of response of all coaches from early to late season, the role of the coach is solidified as director of player/team performance. It was encouraging that as the season progressed, all coaches regardless of record became more actively involved and increased their rate of feedback.

The stated intent of the youth softball program under investigation was instructional. No win-loss records were published, no post-season play occurred, and no all-stars were chosen, so the coaches may have been allowed to operate in a more instructional atmosphere than coaches observed in the other studies [redacted]. The encouraging finding from the results of the softball study was an apparent avoidance of the professionalization of players so often seen in youth sports.

This examination of [redacted]cs does not substantiate a "profile" of winning and losing coaches based upon significant differences in behavior. Also, the question of whether a coach would increase or decrease feedback rates if his/her team was ahead or behind at the end of three

innings was not found to be significantly different.

In examining youth sports programs and the relationship between coaches and their resultant behaviors, a multitude of variables may play a role in the observed feedback rate. For example, the greatest number of verbal responses (Cat. 1-4) by any one coach was 407. Conversely, the fewest responses directed at players by a coach was 153. This may be explained by the differing personalities of the coaches involved or by the role assignment of the head coach versus the assistant coach in providing feedback to the players. If assistant coaches had been observed a combination of their feedback frequency might have yielded no significant differences in total feedback rates given to a particular team. This would be one of the variables that might elude adequate research control. Other factors confounding the interaction of coaches' behavior and team success are: players' ability, competitive orientation and game conditions.

The scope of this study included only one age group and the researchers would conjecture that other age groups may have produced different results. Similarly, the sex of the coach was intended to be examined, however the sample yielded only 3 female coaches.

In a final appraisal, one aspect of youth sports which was not addressed in this girls' softball study, but may be most vital to the player-coach phenomena is: how an individual player, players, or whole team reacts or responds to the specific comment(s) of their coach. Do players have an opportunity to change their behavior, make adjustments, correct errors, and so on, during a game; and to what extent do the comment(s) affect the player/team, are questions not answered when observing the coach alone. Hopefully, future research in the area of youth sport coaches will address these and other important and unanswered questions concerning the player-coach relationship.

TABLE 1

Youth Softball Coaches Frequency and Category of Feedback Response

| COACH | SEASON | (1) CATEGORY (2) | | (3) CATEGORY (4) | | COMBINED 1 & 2 | 3 & 4 | COACH WIN-LOSE |
|---|---|---|---|---|---|---|---|---|
| 1 | E | 180 | 212 | 3 | 13 | 392 | 16 | L |
| | L | 313 | 253 | 1 | 5 | 566 | 6 | |
| 2 | E | 237 | 152 | 0 | 4 | 389 | 4 | L |
| | L | 309 | 309 | 1 | 1 | 618 | 2 | |
| 3 | E | 144 | 116 | 9 | 47 | 260 | 56 | L |
| | L | 193 | 360 | 6 | 44 | 353 | 50 | |
| 4 | E | 141 | 96 | 1 | 8 | 237 | 9 | W |
| | L | 205 | 199 | 2 | 1 | 404 | 3 | |
| 5 | E | 89 | 57 | 4 | 10 | 146 | 14 | W |
| | L | 172 | 209 | 4 | 5 | 381 | 9 | |
| 6 | E | 96 | 73 | 0 | 0 | 169 | 0 | W |
| | L | 295 | 190 | 0 | 3 | 485 | 3 | |
| 7 | E | 210 | 180 | 7 | 5 | 390 | 12 | L |
| | L | 374 | 383 | 5 | 2 | 757 | 7 | |
| 8 | E | 140 | 176 | 5 | 0 | 316 | 5 | W |
| | L | 177 | 336 | 4 | 2 | 513 | 6 | |
| 9 | E | 80 | 73 | 0 | 0 | 153 | 0 | L |
| | L | 118 | 134 | 0 | 0 | 252 | 0 | |
| 10 | E | 111 | 154 | 2 | 14 | 265 | 16 | W |
| | L | 189 | 123 | 2 | 2 | 312 | 4 | |
| 11 | E | 102 | 61 | 0 | 0 | 163 | 0 | W |
| | L | 142 | 198 | 2 | 0 | 340 | 2 | |
| 12 | E | 79 | 123 | 1 | 12 | 202 | 13 | L |
| | L | 195 | 208 | 4 | 4 | 403 | 8 | |
| 13 | E | 134 | 141 | 2 | 1 | 275 | 1 | W |
| | L | 214 | 295 | 3 | 1 | 509 | 3 | |
| TOTAL | E | 1743 | 1614 | 33 | 113 | 3357 | 146 | |
| | L | 2896 | 3197 | 33 | 70 | 6093 | 103 | |
| % OF TOTAL RESPONSE | | 44% | 45.5% | 1.5% | 1% | 89.5% | 2.5% | 92% |

Note: Nonverbal feedback comprises nearly 8% of remaining feedback while other 1% falls in miscellaneous category

TABLE 2

Comparison of Feedback from Winning and Losing Coaches

| | $\bar{X}$ Win* | $\bar{X}$ Lose* | t | .05 Level |
|---|---|---|---|---|
| Pos. fdback Cat. 1 | 12.36 | 13.76 | 2.89 | significant |
| Pos. correct. Cat. 2 | 5.09 | 4.48 | .95 | not sig. |
| Neg. fdback Cat. 3 | 1.6 | 1.8 | 1.06 | not sig. |
| Neg. correct. Cat. 4 | 1.77 | 2.65 | 2.63 | significant |
| Pos. other Cat. 5 | 1.52 | 1.84 | 1.7 | not sig. |
| Neg. other Cat. 6 | 1.28 | 1.58 | 1.9 | not sign. |
| Misc. Pos. Cat. 7 | 1.85 | 1.62 | 1.33 | not sig. |
| Misc. Neg. Cat. 8 | (Not Sig. | dif. on ANOVA) | | |
| Non-VB Pos. Cat. 9 | 5.09 | 4.49 | 2.53 | significant |
| Non-VB Neg. Cat. 10 | 1.61 | 1.96 | 1.78 | not sig. |

* from transformed data on winning and losing coaches

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